# NATURAL RESOURCES CONSERVATION SERVICE Wyoming CONSTRUCTION SPECIFICATIONS FOR OPEN CHANNEL

(Owner/Operator)

# (Project Title)

#### **GENERAL**

Installation shall be in accordance with an approved design and plan. Details of construction shown on the drawings but not included herein are considered as a part of this specification. Construction activities shall be in accordance with applicable OSHA regulations.

# FOUNDATION PREPARATION

The foundation area for all canal or lateral ditch pads and embankments shall be cleared and stripped of all brush, roots, sod, large rock or other material not suited for making a compacted earthfill.

#### **EXCAVATION**

Canal or laterals shall be excavated to the lines and specified grades as shown on the drawings or as staked in the field. The finished crosssection shall have a smooth surface.

Excess materials shall be disposed of in designated spoil disposal areas. Overfill on canal or lateral banks is permissible if it does not interfere with the function of the ditch or related structures

#### **EMBANKMENTS**

Embankment materials shall be free of brush, roots, sod, rock or other material not suited for making earthfill. Moisture content and method of placing in nearly horizontal lifts and method of compaction with equipment shall result in a firm compacted fill.

The thickness of layers prior to compaction shall not be more than 8 inches in thickness. Compaction shall be no less than two passes of

pneumatically tired equipment over the entire surface area of each lift.

The surface of the fill and the materials being placed shall be maintained within the range of plus or minus 2 percent for optimum compaction. Generally when soil materials are squeezed in the hand they will form and retain a ball shape, but no free water will appear.

Materials that are too wet will be removed and or reworked until excess moisture is removed.

Water will be added to borrow materials that are too dry, either at the borrow area or on the fill. Where practical water shall be added at the borrow source. Fill materials that dry between placement of lifts shall be removed/reworked/wetted to the required moisture content and re-compacted before the placement of additional fill.

## **STRUCTURES**

Structures shall be installed in conjunction with the ditch when shown or listed on the drawings. Construction shall be in accordance with applicable Wyoming Construction Specification 578 or as noted in ADDITIONAL SPECIFICATIONS of this Specification.

# CONSTRUCTION OPERATION

Site ingress and egress routes shall minimize the removal or destruction of riparian trees and shrubs. When specific routes are identified the Contractor shall avoid travelling over other areas.

Construction shall be done in accordance with the following unless specific approval of other procedures has been given in the project stream alteration permit:

- a. No construction equipment shall be operated below the existing water surface without specific approval except as follows: fording the stream at one location only will be permitted unless otherwise specified, however, vehicles and equipment will not be permitted to push or pull material along the streambed below the existing water level. Work below the water, which is essential for preparation of culvert bedding or approved footing installations shall be permitted to the extent that it does not create unnecessary turbidity or stream channel disturbance. Frequent fording will not be permitted in areas where extensive turbidity will be created.
- b. Any temporary crossings, bridge supports, cofferdams, silt fences or other structures specified or needed during the period of construction shall be completely removed from the stream channel at the conclusion of construction and the area shall be restored to a natural appearance.
- c. Care shall be taken to cause only the minimum necessary disturbance to the natural appearance of the area. Streambank vegetation shall be protected except where its removal is absolutely necessary for completion of the work.

## POLLUTION CONTROL

The Contractor shall take appropriate measures to minimize the chance of any oil or fuel spills from entering the stream. Equipment parking, maintenance and refueling will be away from the edge of the stream.

#### ADDITIONAL SPECIFICATIONS